

# Material Safety Data Sheet

Radiator Flush

MSDS No. 064

Date of Preparation: 08-01-01

Revision: 12-02-05

## Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** Radiator Flush

**Part Number(s):** 4017

**CAS Number:** Not applicable to mixtures

**General Use:** Automotive product

**Manufacturer:** Berryman Products, Inc., 3800 E. Randol Mill Rd., Arlington, TX 76011-5434

Phone: 1-800-433-1704, Emergency phone number: 1-800-535-5053.

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

## Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
Sodium Gluconate	527-07-1	1-10
Sodium Metasilicate	6834-92-0	1-10
Sodium Hydroxide	7732-18-5	1-10

### Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Sodium Gluconate	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Sodium Metasilicate	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Sodium Hydroxide	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

## Section 3 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance and Odor:** Light Yellow Color

**Vapor Pressure:** N/A

**Vapor Density (Air=1):** N/A

**Density:** 9.10 lbs/gal

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.091

**Boiling Point:** 210-212 °F

**Refractive Index:** N/A

**% Volatile:** N/A

**Evaporation Rate:** N/A

## Section 4 - Fire-Fighting Measures

**Flash Point:** N/A

**Flash Point Method:** N/A

**LEL:** N/A

**Flammability Classification:** N/A

**Extinguishing Media:** Use water spray, carbon dioxide, foam, dry chemicals.



**Unusual Fire or Explosion Hazards:** Containers exposed to intense heat should be cooled with water to prevent vapor pressure buildup, which could result in the weakening of the container structure and rupture.

**Fire-Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Wear self-contained breathing apparatus pressure demand, MSNA/OSHA (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool.

## Section 5 - Stability and Reactivity

**Stability:** Radiator Flush is stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization cannot occur.

**Chemical Incompatibilities & Conditions to Avoid:** Isolate from acidic materials.

**Hazardous Decomposition Products:** None known.

## Section 6 - Health Hazard Information

### Potential Health Effects

**Primary Entry Routes:** Skin, dermal, inhalation and ingestion.

**Target Organs:** Eyes, skin.

**Acute Effects:** May cause irritation, redness and blurred vision to the eyes. Skin may become irritated and develop dermatitis. Vapors may cause nausea, headache, fatigue, weakness and irritation to nose, throat and respiratory system.

**Carcinogenicity:** IARC, NTP, and OSHA do not list Radiator Flush as a carcinogen.

**Chronic Effects:** None known.

### Emergency and First Aid Procedures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

**Eye Contact:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**Skin Contact:** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**Ingestion:** GET MEDICAL ATTENTION IMMEDIATELY. Do not induce vomiting.

*After first aid, get appropriate in-plant, paramedic, or community medical support.*

## Section 7 - Spill, Leak, and Disposal Procedures

**Spill /Leak Procedures:** Eliminate all sources of ignition. Stop spill at source. Wear appropriate personal protective equipment (Sec. 8). Contain the spill to facilitate cleanup with absorbent. Use non-sparking tools and equipment. Transfer to disposal containers.

**Containment:** For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

**Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state and local regulations.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

## Section 8 - Exposure Controls / Personal Protection

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

*Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

## Section 9 - Special Precautions and Comments

**Handling Precautions:** Avoid prolonged breathing of vapor and contact with eyes, skin and clothing. Use in well ventilated area. Wash thoroughly after handling.

**Storage Requirements:** Avoid contact with acids. Keep container closed when not in use. Keep out of reach of children. Store in containers that are resistant to alkaline solutions.

**California Proposition 65:** This product contains the following chemicals known to the state of California to cause cancer and/or reproductive toxicity: None.

**DOT Transportation Data (49 CFR 172.101):****Part Number(s):** 4017**Shipping Name:** Consumer  
Commodity**Hazard Class:** ORM-D  
**ID No.:** N/A  
**Packing Group:** N/A**SARA Title III Section 313 Supplier Notification:**

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the emergency Planning & Community Right-To-Know-Act of 1986 & of 40CFR 372: None.

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**Disclaimer:** All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.